

REMARKS

Amended claims 2, 3 and 4 are now pending in this application. Claim 2 has been rewritten to include the limitations of claim 1, and claims 5 and 6 have been combined into amended claim 4.

Claim 2 was rejected by the Examiner under 35 U.S.C. 112 as not directed to a 55% VOC composition. Applicant respectfully wishes the Examiner to reconsider this rejection because the HFC propellant component in an amount of 31 wt.% of the composition is not considered by the standards established for a 55% VOC composition as being included in the VOC portion of the composition. Accordingly, amended claim 2 does conform to a 55% VOC composition because its "volatile" components are 45% ethanol and 6% of a 50/50 wt/wt mixture of propane and isobutene, a total of only 51% VOCs. Applicant has noted the Examiner's recommendation that the full term "volatile organic compound ("VOC") be included in the claim, and such term now is part of amended claim 2 herein.

Claims 1-3 and 5 were rejected under 35 U.S.C. 103(a) over Dobbs ('983) in view of RD 422068. The Examiner has alleged that Dobbs teaches a hair spray with reduced VOCs, and discloses propellants such as dimethyl ether, isobutene and propane and solvents such as ethanol. The Dobbs compositions were considered to comprise a fixative, ethanol, methyl acetate and/or butyl acetate, a propellant and optionally water. In the preferred embodiments of Dobbs, the methyl acetate solvent comprises 10 to 40 wt.% of the composition. Conventional propellant are suggested by Dobbs but not in any formulation which can provide a high pressure, forceful (70 psi) spray with a desired spray particle size (60  $\mu$ m).

Applicant respectfully traverses the Examiner's rejection of amended claims 2, 3 and 4 on Dobbs or RD, alone or in combination.

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In particular, the essential component in the Dobbs composition namely, the methyl and/or butyl acetate solvent, is absent in the composition of this invention, and the term "consisting essentially of" would further exclude it from this composition. Furthermore, the Dobbs propellant, if present, can be dimethyl ether alone, or a mixture of propane and isobutene, or methane, ethane, propane, isobutene, dimethyl ether, or 1,1-difluoroethane, or mixtures thereof. However, the reference does not teach, disclose or suggest, a propellant system "consisting essentially of" of about 31% 1,1-difluoroethane and 6% propane/isobutene (as a 50/50 wt. mixture). The invention propellant system, in contrast to the Dobbs pump or aerosol composition, uniquely provides a high pressure, forceful (about 70 psi) hair spray composition delivering a mean spray particle size (about 60  $\mu\text{m}$ ) to the root of the hair, allowing for a dispersed, relatively dry spray pattern which provides root uplifting and apparent volume on the hair with low tack on wet or dry hair. None of the examples in Dobbs (Exs. 9-11) show or suggest such a composition, or the advantageous results achieved herein for hair styling.

The Examiner has cited RD to show that the preferred film-former of the claimed composition is known in the art. However, applicant has disclosed in the specification that this copolymer was described by Ulmer (ISP) and is sold commercially as Aquaflex<sup>®</sup> FX-64 (ISP). However, as claimed, the film-former is only part of the inventive features herein. More particularly, a 55% VOC hair spray composition having high pressure and predetermined particle size is made available by use of a specifically defined propellant system consisting of the three propellant components in defined amounts. Reconsideration is respectfully requested.

Claims 4 and 6 were rejected under 35 U.S.C. 103(a) on Dobbs, RD and Chang. However these claims are dependent on claim 2 and include all the inventive limitations present in claim 2. Accordingly, the inclusion of certain preferred ingredients in the composition of claim 2 is also considered allowable over the cited references. Reconsideration is respectfully solicited.

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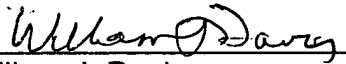
Claims 1 and 3-5 were rejected on Kalbfleisch ("K"). The Examiner has stated that the reference components are mixed with a propellant mixture of dimethylether/propane, but not with an HFC and propane/isobutene, and, clearly not in the defined amounts of each of these propellants. In fact, Kalbfleisch prefers a mixture of at least one lower alkane and dimethyl ether, and that lower alkanes can be used with a mixture of dimethyl ether or HFC. Claim 1 has been cancelled herein and claim 2 (not rejected on "K") is the sole independent claim in the application. Claims 3-5 are dependent upon claim 2. Reconsideration is respectfully requested.

Claim 6 now is part of claim 4, and is dependent upon claim 2 which is considered allowable over the cited references, alone or in combination.

In view of the foregoing, the claims as amended are believed to be patentable over any of the cited references, and in condition for allowance. Accordingly, reconsideration and early allowance is respectfully solicited.

In the event any issue still remains after this amendment, the Examiner is urged to call applicant's attorney, at 973-628-3529 to discuss the matter.

Respectfully submitted,

  
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